

Tachys windsorensis, spec. nov. from North Queensland, a further new species of the *Tachys ectromoides*-group

(Insecta, Coleoptera, Carabidae, Bembidiinae)

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Tachys windsorensis, spec. nov. from the Windsor Tableland in North Queensland is newly described. It belongs to the *Tachys ectromoides*-group of Darlington, and within this group it is next related to *T. bolus* Darlington and *T. bolellus* Darlington, both known so far from New South Wales. The new species is perhaps semi-arboricolous, since the holotype was collected by pyrethrum knockdown in rain forest, most probably carried out on mossy tree trunks.

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Introduction

As discussed recently (Baehr 1989), the *Tachys ectromoides*-group sensu Darlington (1962) is outstanding within the Australian *Tachys* sensu lato as well in the lebiine- or trechine-like appearance, as in the arboricolous or litter-inhabiting habits of its members. Although this group is distinguished by several characteristics (Baehr 1989), the habitus of the species is rather different according to their systematic position within the group. The known species occur along the eastern coast of Australia and in south-western Australia, where they live in rain forest (in the east), or in open eucalypt forest (in the south-west).

While checking arboricolous *Tachys* from North Queensland, collected by G. B. Monteith and co-workers by means of pyrethrum knockdown, I discovered the new species which is closely related to the trechine-like species *T. bolus* Darlington and *T. bolellus* Darlington known so far only from New South Wales (Darlington 1962, Baehr 1989).

Measurements

Measurements were made under a stereomicroscope using an ocular micrometer. Length has been measured from apex of labrum to apex of elytra and may thus slightly differ from that of other authors.

Acknowledgements

I am greatly indebted to Dr. G. B. Monteith (Brisbane) who kindly sent me the new as well as many other tachyine species for examination.

Recognition

As the new species is very closely related to both Darlington's species lacking elytral punctures, the key of my recent paper (Baehr 1989) has to be extended beginning from couplet 3.

Extended key to species of *ectromoides*-group, partly from Darlington (1962)

1. Elytra with pattern. Dorsal elytral punctures present 2.
- Elytra unicolorous. Dorsal elytral punctures absent 3.
2. Elytra yellow with wide brown fascia and piceous apex. Antennae yellow throughout. Pronotum very wide, base almost as wide as middle. Surface strongly reticulate. Eastern Australia . . . *ectromoides* Sloane
- Elytra piceous with indistinct lighter spots at shoulders and in last third. Antennae piceous with 1st, 2nd, and base of 3rd segments yellow. Pronotum evidently narrowed to base. Surface almost smooth, nitid. South-western Australia *marri* Baehr
3. Larger species, 3.2–3.6 mm long. Head and pronotum rufous, elytra piceous. Median segments of antennae c. 3 × as long as wide. New South Wales *bolus* Darlington
- Smaller species, 2.6–2.9 mm long. Wholly light or dark piceous. Median segments of antennae c. 1.5 × as long as wide or shorter. Eastern Australia 4.
4. Pronotum wider, ratio width/length > 1.4; base evidently wider than apex, ratio c. 1.4. Eyes slightly more protruding, orbits smaller. Elytra more evenly rounded, widest in middle. Striae little impressed, almost smooth, lateral striae feebly indicated. 8th stria not reaching anterior lateral pores. Colour reddish castaneous. New South Wales *bolellus* Darlington
- Pronotum narrower, ratio width/length < 1.35; base little wider than apex, ratio c. 1.28. Eyes slightly less protruding, orbits larger. Elytra less evenly rounded, widest well behind middle. Striae well impressed, distinctly crenulate in anterior half, lateral striae well marked. 8th stria clearly reaching anterior lateral pores. Colour almost black, only pronotum dark piceous. North Queensland . . . *windsorensis*, spec. nov.

Tachys windsorensis, spec. nov.

(Figs 1–2)

Types. Holotype: ♀, Windsor Tableland, N. Qld., 10 Jan. 1989, 1140 m, E. Schmidt & Anzsas, Site 1, pyrethrum (Queensland Museum, Brisbane).

Type locality: Windsor Tableland, northwest of Mossman, North Queensland, Australia.

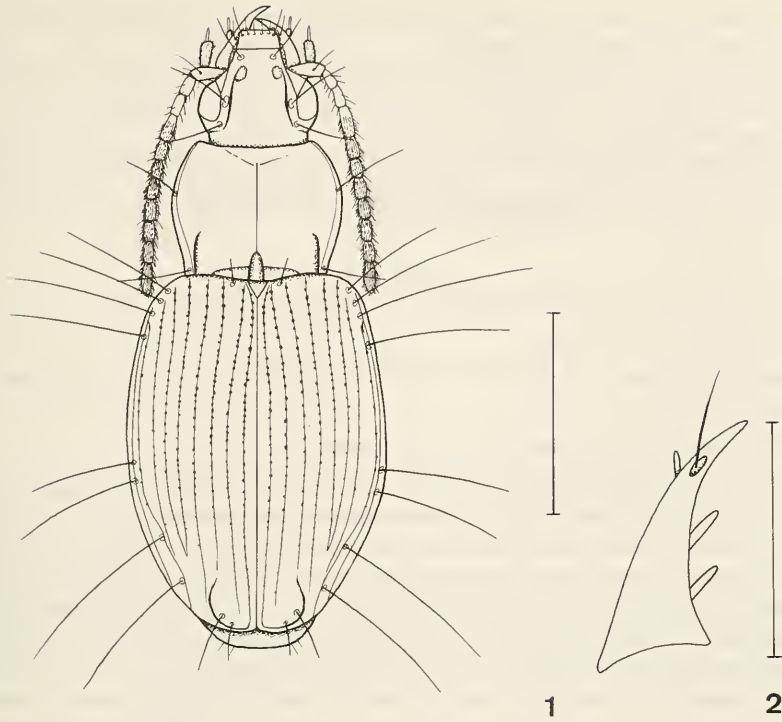
Diagnosis. Appearance very trechine-like. With technical characters of *T. ectromoides*-group, distinguished from other species by absence of discal elytral punctures, size, very dark colour, elytra with rather deeply impressed, crenulate striae, and 8th stria reaching group of anterior lateral pores.

Description

Measurements. Length: 2.9 mm; width: 1.28 mm; ratio width/length of pronotum: 1.35; ratio width of base/apex of pronotum: 1.28; ratio width of elytra/pronotum: 1.52.

Colour. Head and elytra very dark piceous to almost black, pronotum feebly lighter, especially near lateral borders and across base, lateral channel of elytra reddish translucent. Anterior part of head reddish-piceous. Antennae reddish, three basal segments feebly lighter. Mouth parts and legs yellowish-reddish. Lower surface reddish to reddish-piceous. Surface of elytra remarkably iridescent.

Head. Moderately wide. Eyes rather depressed, orbits large, convex, length of orbits almost a third of diameter of eyes. Temporal furrows deep, slightly curved, laterally bordered by a conspicuous ridge, not prolonged onto clypeus, but ending anteriorly in a rather deep pit. Anterior borders of clypeus and labrum straight. Mandibles rather elongate. Altogether, dorsal aspect of head markedly tre-



Figs 1. and 2. *Tachys windsorensis*, spec. nov. 1. ♀ holotype. Scale: 1 mm. 2. Right ♀ stylomere 2, ventral view. Scale: 0.1 mm.

chine-like. Mentum bifoveate, tooth present, though wide and rather obtuse. Terminal segments of both palpi very elongate, markedly subulate. Antennae medium-sized, surpassing base of pronotum by about one segment. Median segments c. $1.5 \times$ as long as wide. Frons with very strong isodiametric reticulation, microsculpture on clypeus and on neck abruptly weakened, there meshes slightly transverse.

Pronotum. Moderately wide. Anterior angles slightly produced, though rounded off, strongly curved inwards. Apex shallowly excised. Pronotum widest in middle, behind anterior lateral seta, strongly narrowed to base, lateral borders posteriorly almost straight. Posterior angles right. Base moderately wide, slightly wider than apex, medially slightly produced. Lateral channel anteriorly narrow, widened towards base, base unbordered. Anterior transverse furrow superficial, interrupted in middle. Median line not attaining apex, near base widened to a conspicuous, deep sulcus. Transverse prebasal sulcus deep, straight, slightly interrupted in middle. Submarginal carina strong, elongate, straight. Basal grooves fairly shallow. Microsculpture on disk superficial, consisting of irregular, very transverse meshes, but strong isodiametric microreticulation present in front of anterior transverse sulcus and across base behind posterior transverse sulcus. Surface of disk nitid, rather iridescent, with scattered, extremely fine punctures.

Elytra. Rather convex, laterally fairly rounded, widest slightly behind middle. Shoulders rounded off. Lateral channel deep and rather wide. Scutellar stria absent. Striae complete, rather deeply impressed, outer striae slightly shallower, though well impressed. All striae distinctly crenulate. Intervals slightly raised. 8th stria sulcate throughout, reaching anterior group of marginal pores. Recurrent stria deep, with a strong ridge behind, almost meeting 3rd stria. No dorsal punctures visible. Marginal setae

very elongate. Microsculpture very weak, consisting of extremely fine transverse lines, giving the surface a highly iridescent appearance. Winged.

Lower surface. Prosternum with several fairly elongate hairs. Metepisternum c. $2 \times$ as long as wide. Terminal abdominal segment of ♀ with two setae on each side and with some short hairs in middle.

Legs. Vestiture of ♂ anterior tarsus unknown.

♂ genitalia. Unknown.

♀ genitalia. Stylomere 2 narrow and elongate, with a long nematiform seta, two well spaced ventro-lateral ensiform setae and a dorsomedial ensiform seta.

Variation Unknown.

Distribution. Known only from type locality in North Queensland.

Material examined. Only the holotype.

Habits. Largely unknown. Holotype was collected by pyrethrum knockdown in upland rain forest. So far collected in January.

Derivation of name. From type locality, the Windsor Tableland.

Remarks. The very trechine-like appearance, especially the comparatively small eyes and very elongate lateral elytral setae, is evidence of a leaf litter inhabiting habit of this species, in the same way as it was ascribed to the related species *T. bolus* and *T. bolellus* (Darlington 1962). However, as the single known specimen of *T. windsorensis* was collected by pyrethrum knockdown generally carried out on mossy trunks or logs, it may live at least semiarboricolous in moss of rain forest trees, perhaps rather close to the ground, because no information is available on the height above ground where the knockdown was done. Hence, the actual habits must be still fixed. It should be noted in this context that the habits of most other species of the *ectromoides*-group are likewise not well known or even doubtful (Darlington 1962, Baehr 1989). Certainly the occurrence in rain forest of this and both related species represent rather unusual habits compared with those of most other tachyine beetles. This, as well as the trechine-like appearance, are strong convergences to the true trechine species. •

References

- Baehr, M. 1989. A new species of the *Tachys ectromoides*-group from Western Australia (Coleoptera, Carabidae, Bembidiinae). — *Spixiana* 12: 279–283
- Darlington, P. J. Jr. 1962. Australian Carabid beetles XI. Some *Tachys*. — *Psyche*, Cambridge 69: 117–128